

Landfill
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SWH

The following comments were extracted from the Comments to the Phase I Remedial Investigation Technical Memorandum, June 2004
Diamond Head Oil Superfund Site
Kearny, New Jersey

COMMENTS IN NEED OF FURTHER DISCUSSION with EPA

Geology and hydrogeology

Comment 31 Fig 3-4 and other cross-sections - Can the topography and a generalized extent of the landfill be indicated on the cross-sections?

OK We did not complete a topographic survey of the site during the Phase 1 RI. We planned on doing this during the Phase 2 RI. We estimate that that change in elevation across the site (with the exception of the landfill) is less than a foot. The USGS 7.5 minute series topographic map is not of sufficient scale and resolution to accurately depict the topographic conditions at the site. Additional borings will be installed during the Phase 2 RI which will be added to the cross sections. CH2M HILL recommends that this comment is addressed during the preparation of the RI report to be prepared after the Phase 2 RI, including the preparation of a topographic map, is performed at the site.

Phase 2
Scope
(incl. this)

Comment 32 Fig. 1-3 and Fig 3-8 to 3-10 - Can we get a detailed map of the topography of the site? Is there a topographic high area near the southeast part of the property, which is the area of highest ground-water levels? Are the wetlands on the site in topographically high or low areas? Was the oil lake on the property a topographically high or low area?

Same as above (Both are low. Southeast). incl. approx. 3' relief.

33 Sect 4.2, pg 4-3 - During future sampling, we should get analyses with appropriate detection limits.

OK All samples were analyzed using the standard CLP TCL and TAL analyses. The elevated chemical concentrations encountered at the site resulted in re-analyses of the samples at higher detection limits. We will work with the project chemist to identify alternatives if any to address this issue and will provide a resolution to EPA before the start of the Phase 2 RI.

36 Sect. 5.3.3, 5th Para. - The detections of VOC's and SVOC's in the northwest corner below the peat (MW-10D) are quite low and may not qualify as a plume.

OK We will add a statement to the text stating "...Of note, this area of contamination has not been delineated during the Phase 1 RI and although referred to as a "plume" in this Phase 1 TM, it may not qualify and be described as such after additional data is collected during the Phase 2 RI....",

Comment 46 Sect. 5.4.2, 2nd Para. - The text states that there is no plume from the landfill. Do we really have an adequate number of wells in proper locations to definitively make the statement that no plume is emanating from the landfill?

The text in this section states "Based on the sampling results for the various environmental media at the site, the landfill does not appear to be a significant source of groundwater contamination." John Prince requested that we discuss the effects of the landfill in the Phase 1 TM based on the



Rework = based "on limited data"

available Phase 1 data. The current analytical results for the wells upgradient and downgradient of the landfill do not indicate an increase in contaminant concentrations downgradient from the landfill. In addition, the water table as observed by the groundwater elevation contours, did not appear to be affected by the topographic high of the landfill. We agree that additional wells both above and below the peat should be installed during the Phase 2 RI to investigate / confirm the effect of the landfill on groundwater contamination and flow. The results will be incorporated into further a discussion of the effects on the landfill in the RI report. }

Comment 48 Pg. 5-15, last Para., last sentence - "thus it appears ..."
- I do not think this is the only conclusion possible. It is likely that real-world conditions at the site are not the maximum estimated values. So it is hard to say without further testing how much retardation and natural attenuation processes have affected plume migration.

*No 56
Sabana
Cienega area*

The discussion and estimates of plume length and migration in this section were based on the limited site-specific geotechnical, geologic, and hydrogeologic data collected during the Phase 1 RI. The Phase 1 RI data were supplemented by literature values in order to develop these estimates. Noting in the TM that the estimates were based on limited data and assumptions, we wanted to present them so that we have an estimated reference point for proceeding with the Phase 2 RI. Additional site-specific data is planned to be collected during the Phase 2 RI and will be used to revise these estimates. To address this comment, CH2M HILL recommends that we add an additional statement in this section stating that these estimates may not be reflecting actual conditions because they are based on assumptions and limited site-specific data. }

Comment 49 Sect. 7 and Fig. 5-5 - Will we be able to obtain ground water samples including field Eh measurements from MW-3 and the piezometers in the southeast part of the site?

*OK
but details
will be discussed
later*

During the phase II RI, we will be able to evaluate water quality parameters such as Eh, pH, electrical conductivity, temperature, etc in the wells / piezometers where free product is encountered. During the Phase 1 RI, we attempted unsuccessfully to collect an aqueous sample from well MW-3 using a submersible pump. We can attempt to sample this well again during Phase II RI using a peristaltic pump if EPA agrees with this procedure. Traditionally, using peristaltic pumps for low-flow sampling has not been acceptable to EPA.

Comment 52 Graphs 5-5a and 5-5b - These plots are not that helpful. This method can be useful in some cases, such as when no cross-sections have been constructed. Plotting water quality cross-sections of selected chemicals would be more useful here.

*Graphs 5-5a
in the graph*

We would like to address this comment in the RI report after performing the Phase 2 RI. The reason is that we currently have only one round of groundwater sampling results, based on which we cannot determine the chemicals that present a plume at the site versus those that are of incidental occurrence and how VOC concentrations vary over the site. To provide some indication on the vertical distribution of the contaminant plumes in the Phase 1 TM, we plotted on cross sections total concentrations of various constituent classes (VOCs, SVOCs). We also prepared iso-concentration contours in plan view (VOC, CVOCs, SVOCs). After additional wells are installed during the Phase 2 and sampled, we should be able to identify individual chemicals to plot in cross-section (for example, we can plot PCE, TCE, and their degradation products to evaluate natural attenuation).

56 Sect. 7.1.10 - Because the landfill on the property probably includes household and construction debris, some leachate-indicator

parameters (major ions - calcium, ammonia, nitrate, bicarbonate, sulfate, chloride, potassium, magnesium) should also be analyzed. These can also be used to better evaluate geochemical conditions and natural attenuation. See also comment 46 above.

The Phase 1 RI included sampling of only one location (upgradient of the landfill) for these parameters. We agree that additional data should be collected and recommend that we do this during the Phase 2 RI from all wells installed at the site.

NJDEP comments

Comment Well search- DEP requested a well search per NJAC 7:26E-3.7 (e).

The Final Draft Site Inspection Report issued by the EPA dated December 31, 1991 states that there are no known wells used for public or private drinking water supply within 4 miles of the site. The report, however, does say that groundwater within 4 miles of the site is used for commercial and industrial purposes only. If EPA desires, we could complete a search of these wells. The search requires time and we would recommend that it be completed independently of finalizing the Phase 1 TM.

COMMENTS THAT REQUIRE COLLECTION OF ADDITIONAL DATA DURING THE PHASE 2 RI AND WHICH CAN BE ADDRESSED IN THE RI REPORT

The following comments can be addressed in the RI Report after completing the Phase 2 RI at the site.

Specific EPA comments

Comments 31 and 32 - related to a topographic map resurvey of MW-13S (also discussed above). (43) same

Comment 46 - Install additional wells to investigate / confirm the effects of the landfill.

Comment 47 - Install wells to the west and south of the landfill during the next phase.

Comment 48 - Collect site-specific data to calculate new estimates (also discussed above).

Comment 49 - Collect field parameters and sample groundwater in wells with free product (also discussed above).

→ Comment 52 - Plotting individual contaminant concentrations on cross sections (also discussed above). → For the RI report

Comment 56 - Collect water quality parameters from all wells (also discussed above).

NJDEP comments

Contaminant delineation - Additional offsite investigation will be planned as part of the Phase 2 RI.

Topography - will add additional text but a topographic map will be prepared during the Phase 2 RI.

Gas vapors - Will include an evaluation of the vapor intrusion pathway into the risk assessment to be completed after the Phase 2 RI.

7.1.3 - Additional offsite investigation will be planned as part of the Phase 2 RI.

7.1.11 - A complete human health risk assessment will be prepared after performing the Phase 2 RI based on Phase 1 and Phase 2 RI data.

+ Your additional comments (11/30, AM)

Certified public key:
Flat name key:

11/30/04 9:37 A

Andy Judd
Dan Ditzer // Mike Lerca

What is not here, will be addressed. (Letter confirming it)

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Internet Certificate	
Internet certificate:	Not Available
Internet certificate issuers:	

Notes Certificates	
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